

Rubric for FY2015-16 Science Title II, Part B Mathematics and Science Partnership Competitive Grant

Incentive points: Although not a federally mandated requirement for the grant, Arizona may award incentive points to proposals submitted by applicants who have not been previously funded by the MSP Program or from specific geographic areas in need of quality professional development in the area of science.

***Up to 8 points can be added at the discretion of the review team based on the quality of the proposal.**

1. Comprehensive Needs Assessment:

The comprehensive needs assessment should indicate a clear statement of needs derived from multiple sources and multiple years if available.

Criteria	Exceeds Standard	Meets Standard	Below Standard
1a. Identification of teacher and student needs	5 points There is clear evidence of baseline data from at least 3 sources (i.e., norm-referenced assessments, AIMS results, district benchmark assessments, college transcripts) to support the selected focus/science professional development needs of the school population. Both teacher and student data are provided. Number and percentage of students to be impacted per site is indicated. Specific student learning needs are provided. Data is disaggregated by grade level and/or course and school.	4 points There is clear evidence of baseline data from 1 teacher and 1 student source (i.e., norm-referenced assessments, AIMS results, district benchmark assessments, college transcripts) to support the selected focus/science professional development needs of the school population. Teacher and student data are provided. Number and percentage of students to be impacted per site is indicated. Specific student learning needs are provided. Data is disaggregated by grade level and/or course and school.	0 points Limited baseline data is given. Needs identified are not adequately supported by evidence.
1b. Identification of professional development needs	4 points In addition to the criteria for “Meets Standard” the needs assessment also includes a correlation between teachers’ content knowledge in science core ideas and practices, and student achievement.	3 points Provides information on the number and percentage of teachers who have sufficient and insufficient content knowledge in science core ideas and practices, disaggregated by school.	0 points Vague or limited information is given about the number of teachers who have sufficient and insufficient content knowledge in science core ideas and practices.

Criteria	Exceeds Standard	Meets Standard	Below Standard
1c. Prioritization of professional development needs	3 points There is clear evidence included that partners have collectively determined which professional development needs are of the highest priority and will be addressed by the project. The needs assessment demonstrates a clear alignment between needs and the targeted content/focus of the grant project.	2 points Some evidence is provided to show that the targeted professional development needs were selected with input from project partners. The needs assessment demonstrates a clear alignment between needs and the targeted content/focus of the grant project.	0 points Limited or no evidence is given to indicate why the partnership selected the targeted professional development needs.

2. Partnership Project SMART Goals and Objectives:

The project goals and objectives should be closely linked to the professional development needs of the teachers.

Criteria	Exceeds Standard	Meets Standard	Below Standard
2a. Description of the project's SMART goals and objectives	5 points Goals are clear and objectives are specific, measurable, attainable, results-oriented, time bound (SMART). Objectives include reducing number of teachers not adequately prepared to teach science core ideas and practices and increasing academic achievement of students taught by teachers in the program.	4 points Goals and objectives are well defined and measurable. Objectives include reducing number of teachers not adequately prepared to teach science core ideas and practices and increasing academic achievement of students taught by teachers in the program..	0 points Goals or objectives are poorly designed and/or not measurable.
2b. Project is designed to achieve SMART goals and objectives	5 points Goals and objectives are specifically linked to the individual professional development needs of the teachers.	4 points Goals and objectives are linked to the professional development needs of the teachers.	0 points Goals or objectives are poorly correlated with the needs assessment.
2c. Theory of action plan or logic model is linked to SMART goals and objectives of project	3 points Describes a detailed theory of action plan or logic model that clearly links to the goals and objectives of the project.	2 points Describes a theory of action plan or logic model that links to the goals and objectives of the project.	0 points Little or no connection is made between the theory of action plan or logic model to the goals and objectives of the project.

3. Research/Evidence Base and Efficacy of Plan to Increase Student Achievement:

The plan for professional development should be guided by research and the Arizona Academic and Arizona Professional Teaching Standards (InTASC Teaching Standards), and the Standards for Professional Learning. The carefully designed activities should link to the SMART goals and objectives of the plan with emphasis on content knowledge and pedagogical content knowledge.

Criteria	Exceeds Standard	Meets Standard	Below Standard
3a. Connecting prior professional development efforts to proposed project	3 points Provides a detailed description of prior efforts to improve teacher content knowledge and student achievement in targeted science core ideas and practices, lessons learned from these prior efforts, and how this project will build on those efforts.	2 points Describes prior efforts to improve teacher content knowledge and student achievement in targeted science core ideas and practices and relates how this project will build on those efforts.	0 points Does not adequately address prior efforts to improve teacher content knowledge and student achievement in science core ideas and practices and/or how this project will build on those efforts.
3b. Activities are linked to SMART goals and objectives of proposal	5 points Provides specific and clear activities that link to the SMART goals and objectives stated in the project and the data provided by the needs assessment.	4 points Evidence is provided that activities will lead to achievement of the SMART goals and objectives.	0 points Little or no correlation is made between activities and achievement of the project's goals or objectives.
3c. Supporting research linking professional development strategies and increased student achievement in science core ideas and practices	6 points Clearly outlines how the professional development strategies are valid and reliable, based on a review of scientifically-based research, and how the project expects to increase student academic achievement in targeted science core ideas and practices and strengthen the quality of science instruction.	5 points Includes clearly documented scientifically-based research that the professional development strategies will increase student achievement in targeted science core ideas and practices and strengthen the quality of science instruction.	0 points Proposal includes references but provides little evidence of research linking professional development strategies to increased student achievement in targeted science core ideas and practices and/or strengthening of the quality of science instruction.
3d. Description and timeline of professional development activities	4 points Includes a clear and detailed description (outlining the targeted science core ideas and practices) and timeline of all the professional development activities (104 hours minimum). Timeline includes the number, types, duration, intensity and responsible partner.	3 points Includes a general description (outlining the targeted science core ideas and practices) and timeline of all the professional development activities (104 hours minimum) Timeline includes the number, types, duration, intensity and responsible partner.	0 points Includes an incomplete description and/or timeline.

Criteria	Exceeds Standard	Meets Standard	Below Standard
3e. Planned activities are aligned with Arizona Academic Standards and Framework for K-12 Science Education.	5 points Includes a clear and detailed description of how the proposed professional development will be aligned to targeted science core ideas and practices in the <i>Framework for K-12 Science Education</i> and connect to concepts within the Arizona Science Standard and AZCCRS for Literacy in Science and Technical Subjects.	4 points Describes professional development that is aligned to targeted science core ideas and practices in the <i>Framework for K-12 Science Education</i> and connects to concepts within the Arizona Science Standard and AZCCRS for Literacy in Science and Technical Subjects.	0 points Provides a limited description of how the professional development is aligned to targeted science core ideas and practices in the <i>Framework for K-12 Science Education</i> and connect to concepts within the Arizona Science Standard and AZCCRS for Literacy in Science and Technical Subjects.
3f. Planned activities are aligned with InTASC Teaching Standards and the Standards for Professional Learning	3 points Describes a detailed plan that clearly illustrates how the proposed professional development is aligned with the InTASC Teaching Standards and the Standards for Professional Learning, and provides for work-embedded application of new learning, continuous reflection, and ongoing support.	2 points Describes how the proposed professional development is aligned with the InTASC Teaching Standards and the Standards for Professional Learning, and provides for work-embedded application of new learning, continuous reflection, and ongoing support.	0 points Does not provide sufficient evidence describing how the proposed professional development is aligned with the InTASC Teaching Standards and the Standards for Professional Learning, or does not provide for work-embedded application of new learning, continuous reflection, and ongoing support.
3g. Planned activities contain rigor and challenging content and develop pedagogical content knowledge	6 points Includes evidence that the professional development is rigorous and challenging in academic content and explicitly addresses knowledge of content and students and knowledge of content and teaching. (Evidence of rigor and challenge should be in the sample lesson plan, description and timeline.)	5 points Includes evidence that the professional development is rigorous and challenging in academic content and also develops pedagogical content knowledge. (Evidence of rigor and challenge should be in the sample lesson plan, description and timeline.)	0 points Provides limited evidence that the professional development is rigorous or challenging in academic content and/or focuses mainly on pedagogy.

Criteria	Exceeds Standard	Meets Standard	Below Standard
3h. Design elements for planned activities	<p>3 points</p> <p>Proposed plan is aligned to a professional development design that fully develops these 4 elements (see Definitions Section):</p> <ul style="list-style-type: none"> • Learn the Content • Reinforce the Content Learning • Consolidate the Learning • Implement the Content <p>Provides within sample plan, evidence that all four elements are addressed. Description of activities and timelines demonstrate the implementation of the 4 elements and indicate that all content offerings (summer and academic year) contain Learn the Content and Reinforce the Content Learning.</p> <p>Detailed plan indicating responsibilities and timeline for creating and maintaining all grant documentation on internet accessible storage.</p>	<p>2 points</p> <p>Proposed plan is aligned to a professional development design that includes these 4 elements (see Definitions Section):</p> <ul style="list-style-type: none"> • Learn the Content • Reinforce the Content Learning • Consolidate the Learning • Implement the Content <p>Provides within sample plan, evidence that all four elements are addressed. Description of activities and timelines demonstrate the implementation of the 4 elements and indicate that all content offerings (summer and academic year) contain Learn the Content and Reinforce the Content Learning.</p> <p>General plan indicating responsibilities and timeline for creating and maintaining all grant documentation on internet accessible storage.</p>	<p>0 points</p> <p>Proposed plan is aligned to a professional development design that is missing one or more of these 4 elements (see Definitions Section) or the sample plan does not provide evidence that all four elements are addressed:</p> <ul style="list-style-type: none"> • Learn the Content • Reinforce the Content Learning • Consolidate the Learning • Implement the Content <p>Description of activities and timelines do not demonstrate the implementation of the 4 elements and/or do not indicate that all content sessions contain Learn the Content and Reinforce the Content Learning.</p> <p>None or limited plan indicated for responsibilities and timeline for creating and maintaining grant documentation on internet accessible storage.</p>

4. Partnership Evaluation and Accountability Plan:*

Identify evaluation methods that the project will use and explain why those methods are appropriate for the identified needs the proposal addresses. A proposal must make a compelling case for the activities of the project and describe how the activities will help the MSP program build a rigorous, cumulative, reproducible, and usable body of findings.

***If one or more indicators in this section are scored “Below Standard,” the grant proposal may be rejected.**

Criteria	Exceeds Standard	Meets Standard	Below Standard
4a. Design of evaluation plan is based on quasi-experimental or experimental design	<p>5 points</p> <p>Describes a detailed evaluation plan based on experimental design, with defined treatment and comparison groups with adequate sample sizes (at least 36 teachers) in each group, in which intervention and comparison groups are constructed by randomly assigning some teachers to participate in the project activities and others to not participate. A short statement of the research questions to be answered is included.</p> <p>Matching characteristics (including, at a minimum, the length of time teaching, grade band, educational degree, and area of education specialization) and methods for reporting the equivalence of the groups is well developed and detailed. A short statement of the research questions to be answered is included. The evaluation plan incorporates reporting requirements (quarterly reports to ADE, Annual Performance Reports, and formal evaluation reports).</p>	<p>4 points</p> <p>Describes a detailed evaluation plan based on a quasi-experimental design in which intervention and carefully matched comparison groups (see section 6, page 17 for comparison group criteria) are constructed, with adequate sample sizes (at least 36 teachers) in each group. A short statement of the research questions to be answered is included.</p> <p>Matching characteristics (including, at a minimum, the length of time teaching, grade band, educational degree, and area of education specialization) and methods for reporting the equivalence of the groups is provided A short statement of the research questions to be answered is included. The evaluation plan incorporates reporting requirements (quarterly reports to ADE, Annual Performance Reports, and formal evaluation reports).</p>	<p>0 points</p> <p>Describes an evaluation plan that is not based on experimental or quasi-experimental design. Strategies for recruitment and retention of intervention and control groups to maintain sample size are not adequately addressed.</p> <p>Matching characteristics and methods for reporting the equivalence of the groups are not provided or do not meet the minimum criteria. The evaluation plan does not adequately incorporate reporting requirements (quarterly reports to ADE, Annual Performance Reports, and formal evaluation reports).</p>

Criteria	Exceeds Standard	Meets Standard	Below Standard
4b. Measurable evidence for impact of project on student achievement and teacher effectiveness goals	5 points Required state measures (RTOP, DTAMS) and additional measures (e.g., NRT, CRT, or district measures) are used to show the impact of the professional development on student achievement and teacher effectiveness. The evaluation plan includes both pre- and post- RTOP observations and pre- and post-testing of teacher content knowledge for the intervention and comparison groups. Description of both summative and formative assessment procedures and the planned analysis of results are included. A description of the statistical tests that will be used in the analyses is well developed and detailed including within group and across group comparisons.	4 points Required state measures (RTOP, DTAMS) are used to show the impact of the professional development on teacher effectiveness. The evaluation plan includes both pre- and post- RTOP observations and pre- and post-testing of teacher content knowledge for the intervention and comparison groups. Description of both summative and formative assessment procedures and the planned analysis of results are included. A description of the statistical tests that will be used in the analyses is included.	0 points Required state measures (RTOP, DTAMS) are not included and/or summative or formative assessment procedures are not described and/or an analysis of results is inadequate. A description of the statistical tests that will be used in the analyses is not included or lacks necessary details.
4c. Contribution to research	3 points Evaluation plan clearly articulates how the activities will help the MSP Program build a rigorous, cumulative, reproducible, and usable body of findings. Appropriate qualifications of the internal and external organization or individuals responsible for executing the plan are included.	1 points Evaluation plan describes how the activities will help the MSP Program build a rigorous, cumulative, reproducible, and usable body of findings. The internal and external organization or individuals responsible for executing the plan are referenced.	0 points Evaluation plan inadequately articulates how the activities will help the MSP Program build a rigorous, cumulative, reproducible, or usable body of findings and/or the internal and external organization or individuals responsible for executing the plan are not referenced.

5. Commitment and Capacity of Partnership:

The project description must clearly demonstrate the submitting partnership has the capability of managing the project, organizing the work and meeting deadlines.

Criteria	Exceeds Standard	Meets Standard	Below Standard
5a. Partnership's role in planning and development of proposal and project development, delivery, and evaluation	4 points Evidence is provided that clearly describes each partner's role in the planning and development of the proposal and each partner's role in the ongoing planning, delivery, and evaluation of the proposed project.	3 points Evidence is provided that outlines each partner's role in the planning and development of the proposal and each partner's role in the ongoing planning, delivery, and evaluation of the proposed project.	0 points Little or no evidence is provided to indicate the role of one or more partners.
5b. Duties and responsibilities related to the goals and objectives of the project	5 points The proposal includes a detailed description of the duties and responsibilities of all project staff members and how they are aligned to the goals and objectives of the proposal.	4 points The proposal includes an outline of the duties and responsibilities of all project staff members and how they are aligned to the goals and objectives of the proposal.	0 points Inadequate information on the duties and responsibilities of all project staff members is provided.
5c. Capacity of partnership	4 points Evidence of the number and quality of staff to carry out the proposed activities and vitas for key partners' staff and Teacher Assurance Forms are provided. Project staff includes science or engineering faculty of an IHE; the number of staff delivering the professional development is proportionate to the number of participants. A project director or co-director from the LEA is included. A description of the specific institutional resources to support project activities is included.	3 points Evidence of the number and quality of staff to carry out the proposed activities and vitas for key partners' staff and Teacher Assurance Forms are provided. Project staff includes science or engineering faculty of an IHE; the number of staff delivering the professional development is proportionate to the number of participants. A project director or co-director from the LEA is included. A description of the institutional resources to support project activities is not clearly detailed.	0 points Explanation of capacity is inadequate and may be missing one or more of the criteria.

Criteria	Exceeds Standard	Meets Standard	Below Standard
5d. Partnership governance	3 points The partnership's governing structure specific to decision-making, communication, and fiscal responsibilities is well-defined and linked to the goals, objectives, and project activities. The proposal includes a description and evidence of how the private schools were informed.	2 points The partnership's governing structure specific to decision-making, communication, and fiscal responsibilities is well-defined. The proposal includes a description and evidence of how the private schools were informed.	0 points Inadequate information is provided related to partnership governance or how the private schools were informed.
5e. Sustainability	3 points There is a clear and specific plan for project continuation. The plan addresses the obstacles to future funding, how assessment data will be used, how the project will be promoted within the school and school districts, and how leadership capacity at the principal and teacher levels will be fostered.	2 points Description of how the project will be sustained and continued when state funding is no longer available is outlined in the plan. The plan addresses all of the following within the outline: how assessment data will be used, how the project will be promoted within the school and school districts and how leadership capacity at the principal and teacher levels will be fostered.	0 points There is an inadequate plan for how the partnership will continue when the state funding is no longer available.

6. Partnership Budget and Cost Effectiveness:*

The budget justification should clearly be tied to the scope and requirements of the project. The budget narrative should describe the basis for determining the amounts shown on the project budget page. All proposals should include provisions for evaluation of the activities.

Criteria	Meets Standard	Below Standard
6a. Budget details (In Narrative)	2 points The proposal provides a general summary of the budget outlining specific costs of each category over the duration of the project; the proposal includes a budget summary for each partner; and the budget supports the scope and requirements of the project.	0 points The proposal provides insufficient budget information regarding specific costs of each category over the duration of the project; the proposal provides insufficient information for each partner; or the budget does not support the scope and requirements of the project.
6b. Cost effectiveness (In Appendix, Narrative)	4 points The amount included in each budget category is detailed and commensurate with the services or goods proposed, and the overall cost of the project is appropriate for the professional development provided and the number of teachers served.	0 points The amount included in each budget category is not commensurate with the services or goods proposed, or the overall cost of the project is not appropriate for the professional development provided and the number of teachers served.
6c. Provisions for evaluation and required meetings (In Appendix)	2 points The budget includes provisions for an evaluation and funds for key staff (specifically the project director(s) to participate in 1 state technical assistance meetings and 1 regional MSP meeting. External evaluation staff must attend the ADE technical assistance meeting/webinar and USDOE regional meeting as needed. Funds are allocated for attendance at the Science RTOP training and/or MSS Facilitator Training(s) as needed.	0 points The budget does not include adequate provisions for an evaluation and/or funds for key staff (specifically the project director(s) to participate in 1 state technical assistance meetings or 1 regional MSP meeting, the external evaluation staff to attend the spring technical assistance meeting, or attendance at the Science RTOP training and/or MSS Facilitator Training(s) as needed.
*Up to 2 incentive points may be awarded if one or more partners provide additional funding for the project beyond that requested in the MSP proposal		